AMENDMENTS TO THE SPECIFICATION

Page 3, please delete the first full paragraph (after the formula) and replace it a follows:

The function F(x) represented in expression (1) is a nonlinear function shown in a graph of FIG. 2 and F(x) = 0 when ~~$|X| > \varepsilon_0$~~ $|x| \geq \varepsilon_0$.

Page 9, please delete the second paragraph and replace it as follows:

FIG. 2 is a graph of the nonlinear function ~~F(X)~~ F(x) used in the ε-filter.

Please delete the paragraph bridging pages 9 and 10 and replace it as follows:

FIG. 8 is a graph to show the nonlinear function ~~φßL, ßh (X)~~ φßL, ßh (x) which defines the newly invented digital filter (ß filter).

Please delete equation (3) on page 12, and replace it with the following new equation (3):

~~$y(m,n) = x(m,n) - \sum_i \sum_j a_{i,j} \cdot F(x(m,n) + x(m+i,n+j))$~~ ~~(3)~~

$$y(m,n) = x(m,n) - \sum_i \sum_j a_{i,j} \cdot F(x(m,n) - x(m+i,n+j)) \quad (3)$$

Please delete the paragraph bridging pages 18 and 19 and replace it as follows:

The ~~Fε (X)~~ Fε (x) (see FIG. 2) returns the same value for x with ~~|X|≤ε~~ |x|≤ε, otherwise it returns 0. Thus, FεH (Δx) and FεL (Δx) becomes the following:

Page 19, please delete the first full paragraph and replace it as follows:

This characteristic indicates a new nonlinear function defined by two parameters ßL and ßh as shown in FIG. 8 ~~(φßL, ßh (X))~~ (φßL, ßh (x)).

Page 19, please delete the second full paragraph and replace it as follows:

Using the new nonlinear function ~~φßL, ßh (X)~~ φßL, ßh (x), expression (5) can be rewritten as the following expression (6):

Please delete the paragraph bridging pages 19 and 20 and replace it as follows:

In other words, expression (6) indicates the characteristic of a new nonlinear digital filter, which uses a new nonlinear function ~~φßL, ßh (X)~~ φßL, ßh (x) to separate and suppress only the variation component of a specific amplitude band. This will be hereinafter referred to as "specific amplitude band variation component separation type digital filter" (or ß-filter). As seen from the fact that expression (6) is derived from expression (4), the function is the same as the function provided by using two ε-filters in combination shown in FIG. 6. Therefore, one ß-filter can accomplish conversion to "smooth skin" while preserving the texture of the skin in one process.

Page 22, please delete the first full paragraph and replace it as follows:

The function ~~φßL, ßh (X)~~ φßL, ßh (x), which is the fundamental part of the ß-filter, is characterized by the fact that it is a nonlinear function acting only on level variations having an amplitude value between the two amplitude values φßL and ~~ßh (X) (φßL ≤ | X | ≤ ßh)~~ ßh (x) (φßL ≤ | x | ≤ ßh), and does not involve minute variation amplitude in the proximity of 0. Both functions of the conventional ε-filter, function ~~φßL, ßh(X)~~ φßL, ßh(x) and nonlinear function ~~F(X)~~ F(x) shown in FIG. 2, define the filter requirement in the amplitude area of level variation; the essential functional difference between both functions ~~φßL, ßh(X)~~ φßL, ßh(x) and ~~F(X)~~ F(x) can be compared to the difference between a band-pass filter and a low-pass filter in frequency.

Page 22, please delete the second full paragraph and replace it as follows:

In other words, the nonlinear function ~~φßL, ßh(X)~~ φßL, ßh(x) is introduced, whereby producing digital filter capable of selectively separating and suppressing or enhancing only level variations contained in a specific amplitude band of an input signal sequence consisting of level variations of various amplitudes.